



POLICY AND PROCEDURE

No. 26-06

MONTGOMERY COUNTY FIRE AND RESCUE COMMISSION

EFFECTIVE DATE:

10/ 8 / 98

TITLE

RESPIRATORY PROTECTION POLICY

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Montgomery County Fire and Rescue Commission

RESPIRATORY PROTECTION POLICY

Issued by: Montgomery County Fire and Rescue Commission
Policy No. 26-06

Authority: Code Section 21-2(d)(2)

Supersedes: DFRS Policy #803, Respiratory Protection Program, 12/12/94
Effective Date: October 8, 1998

SUMMARY: This policy adopts requirements consistent with the provisions established in 29 CFR 1910.134, Respiratory Protection Standard, issued by the United States Department of Labor, Occupational Safety and Health Administration, for implementation by all current and future Montgomery County Fire and Rescue Service personnel. The policy outlines provisions for the selection, fit testing, maintenance, repair, and safe use of all components of respiratory protection equipment, and the medical evaluations, training certifications, and record keeping required for the fire and rescue services personnel who use them. Certain requirements of this policy also establish safety procedures for use when these personnel perform operations in atmospheres which are immediately dangerous to life and health.

STAFF: For additional information, please contact Beth Feldman, Administrative Specialist, Montgomery County Fire and Rescue Commission, at 217-2989.

BACKGROUND: The Occupational Safety and Health Administration (OSHA) has recently published a final ruling on workplace safety requirements for respiratory protection with its adoption of CFR 1910.134. As a "plan state," Maryland Occupational Safety and Health (MOSH) requires the adoption of conforming rule, regulation, and policy



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within six months of OSHA publication. Because MOSH has determined that where career and volunteer firefighter/rescuers are deployed together, all firefighter/rescuer personnel must comply with these requirements, Montgomery County's Fire and Rescue Service is adopting this policy to ensure the health and safety of all of its personnel in the firefighter/rescuer operational series.

Sec. 1. **Purpose:** To establish a policy to reduce the risk of injury and illness to fire and rescue personnel while they are working in atmospheres which are immediately dangerous to life and health.

Sec. 2. **Applicability.** This policy applies to all personnel who perform firefighting and rescue duties in the Montgomery County Fire and Rescue Service.



This policy was developed in cooperation with IAFF Local 1664.

Sec. 3. **Definitions.**

- a. **ANSI Z88.6 - 1984.** American National Standards Institute, Inc. standard for respiratory protection - respirator use - physical qualifications for personnel.
- b. **Compressed Breathing Air.** Compressed breathing air with a minimum air quality of Grade D, as well as a water vapor level of less than 25 ppm as specified by the Compressed Gas Association, G-7.1, 3rd Edition, 1989, commodity specification for air.
- c. **Division of Fire and Rescue Services (DFRS).** Career personnel component of Montgomery County's Fire and Rescue Service.



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- d. **EBSS**. Abbreviation for Emergency Breathing Support System, which allows two users of similarly equipped SCBA to share a common air supply.
- e. **Facepiece**. Component of the respirator which covers the wearer's nose, mouth, and in some cases, the eyes. It includes the headbands, exhalation valves and in some cases components that are required to connect it to a respirable air supply.
- f. **Fire Administrator**. The non-uniformed head of the Montgomery County Fire and Rescue Service who has all powers of a department director, administers all fire and rescue services provided in the County, and implements the policies of the Fire and Rescue Commission.
- g. **Immediately Dangerous to Life or Health (IDLH)**. An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
- h. **Local Fire and Rescue Department (LFRD)**. Individual fire department or rescue squad corporation authorized by Code Sec. 21-6 to provide fire or rescue services.
- i. **MSHA**. Abbreviation for Mine Safety Health Administration.
- j. **NIOSH**. Acronym for National Institute for Occupational Safety and Health.
- k. **PASS Device**. Acronym for the Personal Alert Safety System unit attached to the turnout gear or built into the Self-Contained Breathing Apparatus.
- l. **Personnel**. All on-duty firefighter/rescuer service providers, both career and volunteer.
- m. **Qualitative Fit Test (QLFT)**. A facepiece testing process used to determine the proper size facepiece for individual personnel. It relies on the individual's response to a test agent.



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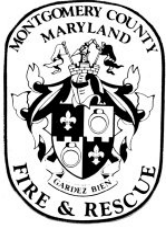
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- n. **Respiratory Protective Equipment (RPE)**. A device designed to protect the wearer from inhaling harmful atmospheres.
- o. **SAR**. Acronym for Supplied Air Respirator, a device which provides air from a stationary storage cylinder through a high pressure hose. SARs include an escape cylinder with at least five minutes of breathing air.
- p. **SCBA**. Abbreviation for Self-Contained Breathing Apparatus.
- q. **SCBA Advisory Committee**. A five member committee chaired by an individual appointed by the Fire Administrator, comprising one representative each from Montgomery County's Division of Risk Management, IAFF Local #1664, Public Safety Training Academy staff, the Division of Volunteer Fire and Rescue Services (appointed by the DVFRS chief), and the Division of Fire and Rescue Services (appointed by the DFRS chief).
- r. **Using SCBA**. Full protective gear on, SCBA in place, facepiece on, breathing from the SCBA, and PASS device activated.
- s. **Wearing SCBA**. Full protective gear on, SCBA in place, facepiece ready for use, not breathing from the SCBA, and PASS device, if not an integral part of the air supply, activated.
- t. **29 CFR 1910.134**. Respiratory protection standard issued by the United States Department of Labor, Occupational Safety and Health Administration (OSHA) that provides rules and regulations on the selection, maintenance and use of self contained breathing apparatus.

Sec. 4. **Policy**: It is the policy of the Fire and Rescue Commission to ensure that all fire and rescue **personnel** use safe and efficient procedures on all emergency incidents. To ensure their safety, the Montgomery County Fire and Rescue Service will provide properly fitted, tested, and maintained **respiratory protective equipment** for all fire and rescue **personnel**. **Personnel** must be trained in and consistently use these devices in all areas where an **IDLH** atmosphere may exist. **Personnel** will be



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provided with **SCBA** and/or **SAR**, as appropriate, which meet the requirements of **NIOSH**, **MSHA**, and **NFPA** applicable standards at the time of purchase.

To further ensure their safety, all Montgomery County Fire and Rescue Service **personnel** must also comply with the "2 in/2 out" procedures established in **29 CFR 1910.134** (g)(3) and (4) when entering an **IDLH** atmosphere.

Sec. 5. Procedure.

General Guidelines. **Personnel using SCBA** must operate in teams of two or more when entering an **IDLH** atmosphere. They must communicate visually, audibly, by physical contact, or with safety guide lines. They should remain in close proximity to each other, enabling them to provide mutual assistance in case of an emergency.

The **SCBA/SAR** will operate only in the positive pressure mode. **SCBA** must have a minimum rated service duration of 30 minutes. **Personnel** must activate the independent **PASS devices** before donning the **SCBA**, and it must remain in the active mode until the **SCBA** is taken off.

- a. **Respiratory Protection Certifications and Fit Testing.** All **personnel** who may be exposed to **IDLH** atmospheres must use **RPE**. **Personnel** who are required to use **RPE** must be medically certified by Montgomery County's Occupational Medical Section.
 1. At a minimum, medical certification must follow the guidelines provided in **29 CFR 1910.134**, Appendix C.
 2. Records of medical certification for the use of **RPE** will be maintained with **personnel** health records. OMS must advise the **Fire Administrator** or designee of **personnel** who are not qualified to use **RPE**.
- b. **SCBA Training and Annual Recertification.** All **personnel** must receive initial **SCBA** training as part of the Essentials of Firefighting course (or through an approved equivalent program), and annual re-certification through the in-service



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training program.

1. The PSTA is responsible for distributing **SCBA** training materials.
 2. **DFRS** District Chiefs or **LFRD** training coordinators must ensure that **SCBA** training is completed in their Districts and in their stations, and that Level I Instructors are available for re-certification and other **SCBA** training.
 3. The training program for initial and annual re-certification must include at least these elements:
 - A. Construction and operation of **SCBA**
 - B. **IDLH** atmospheres identification
 - C. Recognition of medical signs and symptoms that may limit or prevent the effective use of respirators
 - D. A "Skills to be Completed" Check List
 - E. Failures and emergency procedures
 - F. Reporting procedures for defective **SCBA**
 - G. Record keeping
 - H. Routine station maintenance after use
 4. **Personnel** who have not participated in field operations for twelve months or longer must complete a re-entry program that includes **SCBA** recertification.
 5. The **Fire Administrator** or designee must maintain records of this training.
- c. **Using and Wearing Respiratory Protection Equipment.** All **personnel** who may be exposed to **IDLH** atmospheres must wear **SCBA**. They may be required to use **SCBA** during the attack and overhaul of fires, or while working at any other incident.
- d. **Facepieces.** All **personnel** must be provided with a correctly fitted **facepiece**. Correct **facepiece** fit will be determined by a **qualitative fit test**. **Personnel** will be tested during initial recruit/probationary training, annually, and when a new **facepiece** design is adopted. Only **personnel** who have been trained in the fit



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testing procedure will conduct the **qualitative fit testing**.

1. **Personnel** who are required to use **RPE** must not allow any object to enter or pass through the area where the **facepiece** must seal with the face or interfere with exhalation valve operation.
 - A. Helmets, head coverings, and protective hoods must be worn outside the **facepiece** seal, head harness and straps.
 - B. **Personnel** who are required to use **RPE** must not have beards or facial hair that interferes with the **facepiece** seal or exhalation valve operation.
 - C. **Personnel** who wear eyeglasses must not use frames that interrupt the seal area of the **facepiece**.
 - D. **Personnel** who are required to use **RPE** must not wear hard contact lenses; however, they may wear soft contact lenses.
2. If OMS determines during routine medical examinations that an individual may not be able to obtain a **facepiece** seal because of physical changes (weight loss, dental work, etc.), OMS staff must recommend to the **Fire Administrator** or designee that a supplemental fit test be performed.
3. **Personnel** will be fit tested when they report problems related to obtaining a **facepiece** seal, or if supervisory or OMS staff observe conditions (such as excessive weight loss) that could affect a proper fit.
4. **Personnel** must not risk exposure by removing the **facepiece** or disconnecting the regulator in hazardous atmospheres.
5. **Personnel** who detect vapor or gas breakthrough, changes in breathing resistance, or **facepiece** leakage must leave the **IDLH** atmosphere and must not re-enter until the problem has been resolved. If a maintenance problem



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may be the cause, the unit must be taken out of service and repaired as described in Sections. 5 g. and 5. j.

6. Each primary piece of apparatus will carry one large **facepiece** for each **SCBA** on the unit, and one small and one extra-large **facepiece** as on-board equipment.
- e. **Emergency Breathing Support Systems (EBSS)**. The **EBSS** connection may be used when a system fails or the firefighter depletes the air supply of the cylinder in use.
 1. When an **EBSS** is provided, it may be used only when the travel distance to a safe area is 100 feet or less.
 2. **EBSS** may be used only when both **personnel** are mobile and ambulatory. If a firefighter/rescuer becomes unconscious, the partner should call for help and perform appropriate rescue. A rescuer must not connect the **EBSS** to an unconscious firefighter; the downed firefighter must be removed from the hazardous area.
- f. **SCBAs during Elevator Use**. On incidents involving a potentially **IDLH** atmosphere, **personnel** who enter an elevator must use **SCBA** before the elevator doors close and the car is permitted to move. **Personnel** must:
 1. note the location of the nearest stairwell before entering the elevator.
 2. note the location of the emergency stop switch .
 3. wear full protective clothing and **SCBA** with cylinder valve open and **facepiece** on, with the regulator in hand for rapid connection. Connect the regulator if the elevator car fails to stop at the midway point.
 4. restrict the elevator operation to upper floors between entry level(s) and a minimum of two floors below the fire, until the fire is under control and the



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Incident Commander has suspended this restriction.

- g. **SCBA Maintenance and Repair Requirements.** An **SCBA** unit must be taken out of service when any defect is found in its assembly.
1. An **SCBA** repair tag must be completed and attached to the unit, and it must be inspected to determine whether in-station or shop maintenance is required.
 - A. In-station maintenance will be performed only to the manufacturer's limitations. The unit may be returned to service after in-station maintenance has been completed.
 - B. If shop maintenance is required, the unit must be transported to the assigned maintenance facility. It may be returned to spare status after shop maintenance has been completed.
 2. An **SCBA** used by a firefighter who suffers respiratory injuries, burn injuries, or line of duty death must be impounded by the Incident Commander. The unit's identification must include the name of the user, the date and location of the incident, and a description of the problem. The Incident Commander must take possession of the unit and all appropriate documentation and deliver it to the Safety Officer or designee. All **personnel** who have handled the respirator involved must sign off on the documentation as the unit is transferred to the Safety Officer.
- h. **SCBA/SAR Records.** A records program must be established and maintained for all **SCBA/SAR**.
1. The records program begins with receipt of the unit and ends with its disposal. Documentation must include a complete history of all in-station and shop maintenance performed on any component.



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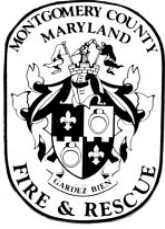
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2. Records must be established for the pressure reducer, **facepiece**-mounted regulator, back-pack assembly, and cylinders.
3. Each completed assembly must be identified by a station number tag.
- i. **SCBA/SAR In-Service Inspection and Maintenance**. All **SCBA** must be inspected, cleaned, disinfected and serviced after each use according to the manufacturer's recommendations. Routine inspections, in-station preventive maintenance, and shop maintenance must also comply with the manufacturer's requirements.
 1. **In-station inspections.** In-station inspections must be logged on forms provided by the **Division of Fire and Rescue Service**. Station officers must ensure that these forms are used daily and monthly, and that the unit is identified either by its serial number or a number the station assigned to that unit. The forms below must be used:
 - A. A daily inspection form;
 - B. A monthly inspection form; and
 - C. A monthly disinfection log.
 2. Original copies of these reports must be stored in the station for 12 months and a copy must be sent to the Safety Office on a monthly basis.
 3. All **SCBA** carried on first-line response unit must be inspected daily, before and after use.
 4. All **SCBA** carried on second line and reserve units must be inspected weekly.
 5. All **SCBA** carried on staff vehicles must be inspected weekly.
 6. All **SCBA** at the PSTA must be inspected before and after use on the days the equipment is used.



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7. All **SAR** must be inspected daily.
- j. **Preventive Maintenance.** All **SCBA/SAR** must receive both preventive maintenance and shop maintenance. All maintenance performed on **SCBA** must comply with the manufacturer's manual for operations and maintenance. Deviations may be permitted only if authorized in writing by the manufacturer or the **Fire Administrator**.
 1. **SCBA** must receive a complete preventive maintenance inspection on a monthly basis, in accordance with the manufacturer's recommendations.
 2. **SCBA** must receive periodic shop maintenance, performed by employees who have been trained and certified by the manufacturer.
- k. **Cylinder and Compressed Breathing Air Testing and Maintenance.** **Compressed breathing air** used in breathing apparatus must meet the requirements of the Compressed Gas Association, G-7.1, 3rd Edition, 1989, commodity specification for air. The minimum air quality is Grade D, with a water vapor level of less than 25 ppm.
 1. **Cylinders.** All cylinders must be maintained in accordance with the Compressed Gas Association and the **SCBA** manufacturer's requirements.
 - A. **SCBA** cylinders must be maintained in a fully charged state and must be re-charged when the pressure drops to 4200 PSI.
 - B. **SCBA** cylinders must be hydrostatically tested according to the manufacturer's recommendations, normally every three years. These tests must comply with the United States Department of Transportation's rules and regulations.
 2. **Compressed Breathing Air.** Sources of compressed gas breathing air such as compressors, cascade systems, and storage receivers used for filling **SCBA** cylinders, must be tested at least every three months.



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- A. Breathing air compressors must be maintained according to the manufacturer's recommendations.
- B. A compressor operational log must be maintained at every facility where compressed air is manufactured.
- C. A list of approved sources of **compressed breathing air** will be provided to each **LFRD**. Only approved sources can be used to supply **SCBA**.

Sec. 6. Responsibilities.

- a. All **personnel** must ensure that their **SCBA** is in order and ready for use with the correctly sized **facepiece** when they are assigned a riding position, before entering an **IDLH** atmosphere, and after each use.
- b. All officers must require their **personnel** to follow these procedures to ensure their personal safety.
- c. The **SCBA Advisory Committee** is responsible for reviewing, evaluating, and making appropriate recommendations on the Respiratory Protection Program as outlined in **29 CFR 1910.134** (I).
- d. The **Fire Administrator** (or designee) is responsible for appointing the chair for the **SCBA Advisory Committee**, for maintaining **personnel** and other records, and for enforcing this Policy.

Sec. 7. **Effective Date.** This policy is effective on October 8, 1998



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Attest:

Gordon A. Aoyagi, Chair
Fire and Rescue Commission

October 8, 1998

Date

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